WE CLAIM:

1. A fluorescence energy transfer dye comprising Formula I:

--L1—D1—FETL—D2---L2— (Formula I)

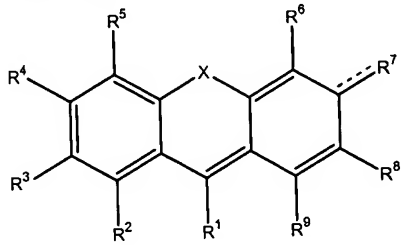
where:

L1 is a link for attachment to a probe or target, for attachment to a solid support, or is absent;

L2 is a link for attachment to a probe or target, for attachment to a solid support, or is absent;

FETL is a fluorescence energy transfer linker;

D1 is a donor dye represented by the formula:



D1

where:

X is O or C(R*R**), where R* and R** are independently lower alkyl or $-CH_2$-Z;

R^1 is H, CF_3, perfluoropropyl, lower alkyl acid, substituted aryl, substituted heteroaryl or Z;

R^2 is H, halo, SO_3^-, or is taken together with R^3 to form an optionally substituted fused ring having 5 to 7 atoms;

R^3 is halo, Z, or is taken together with R^2 and/or R^4 to form an optionally substituted fused ring having 5 to 7 atoms;

R^4 is =O or OH, -N($R^{4'}R^{4''}$) or =N^+($R^{4'}R^{4''}$), or is taken together with R^3 and/or R^5 to form an optionally substituted fused ring having 5 to 7 atoms,

where $R^{4'}$ is H, lower alkyl or L1, and

$R^{4''}$ is H, lower alkyl or CH_2-Z;

R^5 is H, halo, Z, or is taken together with R^4 to form an optionally substituted fused ring having 5 to 7 atoms;

R^6 is H, halo, Z, or is taken together with R^7 to form an optionally substituted fused ring having 5 to 7 atoms;

R^7 is =O or OH, -N($R^{7'}R^{7''}$) or =N^+($R^{7'}R^{7''}$), or is taken together with R^6 and/or R^8 to form an optionally substituted fused ring having 5 to 7 atoms,

where $R^{7'}$ is H, lower alkyl or L1, and

$R^{7''}$ is H, lower alkyl or CH_2-Z;

R^8 is halo, Z, or is taken together with R^7 and/or R^9 to form an optionally substituted fused ring having 5 to 7 atoms;

R^9 is H, halo, SO_3^-, or is taken together with R^8 to form an optionally substituted fused ring having 5 to 7 atoms; and

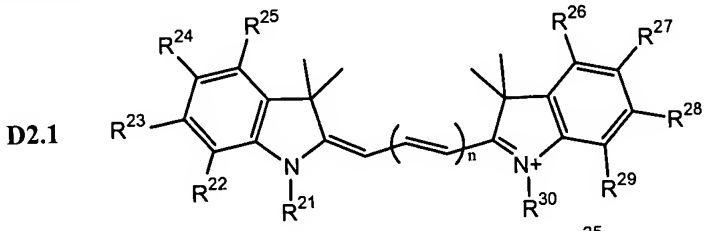
Z is a group of the formula: $-Z^*-Z^1-$ (***L1, L2 or FETL***), where:

Z^* is methylene, methoxy, ethoxy, aminomethyl, aminoethyl, aminopropynyl, aminobutynyl, carboxyethenyl, carboxyethynyl, optionally substituted aryl or optionally substituted heteroaryl;

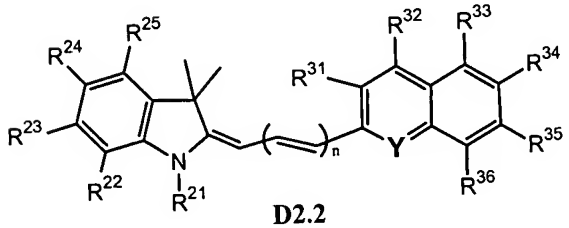
Z^1 is $-C(O)-$, $-N(Z^2)-$, $-CH_2-O-$, $-CH_2-C(O)-$, $-CH_2-N(Z^2)-$, $-CH_2-S-$, $-CH_2-S(O)-$, $-CH_2-S(O_2)-$ or is absent; and

Z^2 is H, C_1 to C_8 optionally substituted lower alkyl, or optionally substituted aryl; and

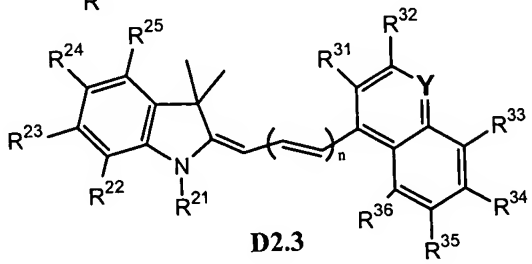
D2 is an acceptor/reporter dye represented by formula D1 or by a formula of the group:



D2.1



D2.2



D2.3

where:

at least one of R^{21} to R^{36} is joined to FETL,

n is zero, 1, 2 or 3;

R^{21} and R^{30} are independently $-CH_2-Z$, activated lower alkyl, or optionally substituted arlkyl;

R^{22} to R^{29} are independently H, SO_3^-, or optionally substituted alkyl, or R^{22} and R^{23}, R^{23} and R^{24}, R^{24} and R^{25}, R^{26} and R^{27}, R^{27} and R^{28}, and/or R^{28} and R^{29} taken together form an optionally substituted fused ring having 6 atoms;

R^{31} and R^{32} are independently H, optionally substituted alkyl, aryl, or taken together form an optionally substituted fused ring having 6 atoms;

R^{33} to R^{36} are independently H, SO_3^-, optionally substituted alkyl, aryl, or R^{33} and R^{34}, R^{34} and R^{35}, and/or R^{35} and R^{36} taken together form an optionally substituted fused ring having 6 atoms; and

Y is $-O-$ or $-N(Y^1)-$ where Y^1 is $-CH_2-Z$, activated lower alkyl, or optionally substituted arlkyl;

provided that at least one of R^3 to R^8 is Z where Z* is optionally substituted aryl or optionally substituted heteroaryl, or a probe-, target- and/or support-conjugate thereof.

2. The fluorescence energy transfer dye of Claim 1 having one or more of the following:

R^1 is H, CF_3, perfluoropropyl, lower alkyl acid, 5-6 membered mono or 10-12 membered fused substituted aryl or heteroafyl, or Z;

R^2 is H, halo, SO_3^-, or is taken together with R^3 to form an optionally substituted fused 6-membered aryl ring;

R^3 is halo, Z, or is taken together with R^2 and/or R^4 to form an optionally substituted fused 6-membered ring;

R^4 is =O or OH, $-N(R^{4'}R^{4''})$ or $=N^+(R^{4'}R^{4''})$, or is taken together with R^3 and/or R^5 to form an optionally substituted fused 6-membered ring;

R^5 is H, halo, Z, or is taken together with R^4 to form an optionally substituted fused 6-membered ring;

R^6 is H, halo, Z, or is taken together with R^7 to form an optionally substituted fused 6-membered ring;

R^7 is =O or OH, $-N(R^{7'}R^{7''})$ or $=N^+(R^{7'}R^{7''})$, or is taken together with R^6 and/or R^8 to form an optionally substituted fused 6-membered ring;

R^8 is halo, Z, or is taken together with R^7 and/or R^9 to form an optionally substituted fused 6-membered ring;

R^9 is H, halo, SO_3^-, or is taken together with R^8 to form an optionally substituted fused 6-membered aryl ring;

R^4 is $-N(R^{4'}R^{4''})$ or $=N^+(R^{4'}R^{4''})$ and R^7 is $-N(R^{7'}R^{7''})$ or $=N^+(R^{7'}R^{7''})$ when X is C(R*R**);

Z is a group of the formula: $-Z^*-Z^1-$ ***(L1, L2 or FETL)***, where:

Z^* is methylene, methoxy, ethoxy, aminomethyl, aminoethyl, aminopropynyl, aminobutynyl, carboxyethenyl, carboxyethynyl, optionally substituted aryl or optionally substituted heteroaryl,

Z^1 is $-C(O)-$, $-N(Z^2)-$, $-CH_2-O-$, $-CH_2-C(O)-$, $-CH_2-N(Z^2)-$, $-CH_2-S-$, $-CH_2-S(O)-$, $-CH_2-S(O_2)-$ or is absent, and

Z^2 is H, or is C_1 to C_8 lower alkyl or aryl optionally substituted with SO_3^-, COOH, NH_2, CH_2NH_2, SH, or SCH_3;

FETL comprises a symmetric, rigid or sterically hindered, divalent moiety joined to D1 and D2 via an amine, carbonyl, activated carboxylic acid ester, disulfide, thiol or thiol ester;

R^{21} or R^{30} is carboxy-naphthyl-methyl, mono- or di-*ortho*-substituted benzyl having an *ortho*-, *meta*- or *para*- carbonyl or activating group, or an activated C_1 to C_6 lower alkyl;

R^{22} to R^{29} are independently H, SO_3^- or optionally substituted alkyl, or R^{22} and R^{23}, R^{23} and R^{24}, R^{24} and R^{25}, R^{26} and R^{27}, R^{27} and R^{28}, and/or R^{28} and R^{29} taken together form a fused, sulfonated 6-membered aryl ring;

R^{31} and R^{32} are independently H, optionally substituted alkyl, aryl, or taken together form a fused, sulfonated 6-membered carbocyclic or heterocyclic ring;

R^{33} to R^{36} are independently H, SO_3^-, optionally substituted alkyl, aryl, or R^{33} and R^{34}, R^{34} and R^{35}, and/or R^{35} and R^{36} taken together form a fused, sulfonated 6-membered carbocyclic or heterocyclic ring; and/or

at least one of R^{22} to R^{29} or R^{33} to R^{36} is SO_3^-.

3. The fluorescence energy transfer dye of Claim 2 having one or more of the following:

R^1 is H, CF_3, perfluoropropyl, lower alkyl acid, an optionally substituted *ortho*-benzoic acid, or Z;

R^2 is H, halo or SO_3^-;

R^3 is halo or Z;

R^4 is =O or OH, $-N(R^{4'}R^{4''})$ or $=N^+(R^{4'}R^{4''})$;

R^5 is H, halo or Z;

R^6 is H, halo or Z;

R^7 is =O or OH, $-N(R^{7'}R^{7''})$ or $=N^+(R^{7'}R^{7''})$;

R^8 is Z;

R^9 is H, halo or SO_3^-;

Z is a group of the formula: $-Z^*-Z^1-$ ***(L1, L2 or FETL)***, where:

Z^* is an optionally substituted aryl or heteroaryl of the group: phenyl, adamantly, norboranyl, biphenyl, naphthyl, furanyl, bifuranyl, thiophenyl, bithienyl, pyrrolyl, indolyl, isoindolyl, benzofuranyl, isobenzofuranyl, benzothiophenyl, benzothienyl, chromenyl and isochromenyl, and

Z^1 is $-C(O)-$, $-N(H)-$, $-CH_2-O-$, $-CH_2-C(O)-$, $-CH_2-N(H)-$, or is absent;

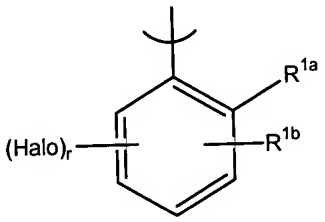
R^{22} to R^{29} are independently H, SO_3^- or optionally substituted alkyl, or R^{24} and R^{25} and/or R^{26} and R^{27} taken together form a fused, sulfonated 6-membered aryl ring;

R^{31} and R^{32} are independently H, optionally substituted alkyl or aryl; and/or

R^{33} to R^{36} are independently H, SO_3^-, optionally substituted alkyl or aryl.

4. The fluorescence energy transfer dye of Claim 3 where R^1 is a group represented by Formula R1.1:

R1.1



where:

R^{1a} is H, halo or $-C(O)O^-$;

R^{1b} is H, halo or $-C(O)-$(***L1, L2 or FETL***);

R^{1c} is halo; and

r is 0, 1, 2 or 3.

5. The fluorescence energy transfer dye of Claim 1 where at least one of R^3 to R^8 is Z where Z^* is optionally substituted aryl selected from phenyl, adamantly, norboranyl, biphenyl and naphthyl.

6. The fluorescence energy transfer dye of Claim 5 where Z* is phenyl and Z^1 is -C(O)-.

7. The fluorescence energy transfer dye of Claim 1 where:

R^1 is H, CF_3, perfluoropropyl, lower alkyl acid, an optionally substituted *ortho*-benzoic acid, or Z;

R^2 is H, halo or SO_3^-;

R^3 is halo or Z;

R^4 is =O or OH, $-N(R^{4'}R^{4''})$ or $=N^+(R^{4'}R^{4''})$;

R^5 is H, halo or Z;

R^6 is H, halo or Z;

R^7 is =O or OH, $-N(R^{7'}R^{7''})$ or $=N^+(R^{7'}R^{7''})$;

R^8 is Z;

R^9 is H, halo or SO_3^-;

Z is a group of the formula: $-Z^*-Z^1-$ (***L1, L2 or FETL***), where:

Z* is an optionally substituted aryl or heteroaryl of the group: phenyl, adamantly, norboranyl, biphenyl, naphthyl, furanyl, bifuranyl, thiophenyl, bithienyl, pyrrolyl, indolyl, isoindolyl, benzofuranyl, isobenzofuranyl, benzothiophenyl, benzothienyl, chromenyl and isochromenyl, and

Z^1 is –C(O)- , -N(H)- , $-CH_2$-O- , $-CH_2$-C(O)- , $-CH_2$-N(H)- , or is absent;

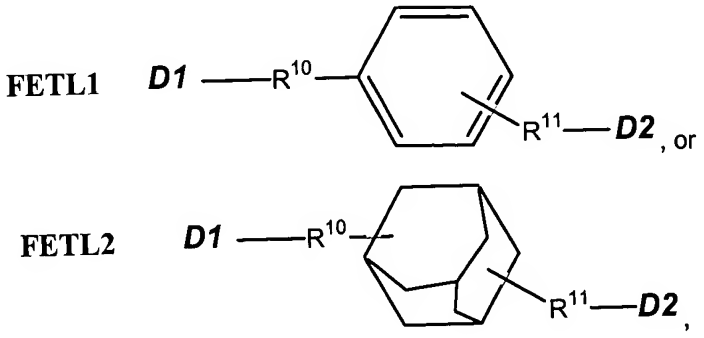
R^{21} or R^{30} is carboxy-naphthyl-methyl, mono- or di-*ortho*-substituted benzyl having an *ortho*-, *meta*- or *para*- carbonyl or activating group, or an activated C_1 to C_6 lower alkyl;

R^{22} to R^{29} are independently H, SO_3^- or optionally substituted alkyl, or R^{24} and R^{25} and/or R^{26} and R^{27} taken together form a fused, sulfonated 6-membered aryl ring;

R^{31} and R^{32} are independently H, optionally substituted alkyl or aryl; and

R^{33} to R^{36} are independently H, SO_3^-, optionally substituted alkyl or aryl.

8. The fluorescence energy transfer dye of Claim 1 where FETL is represented by a formula of the group:

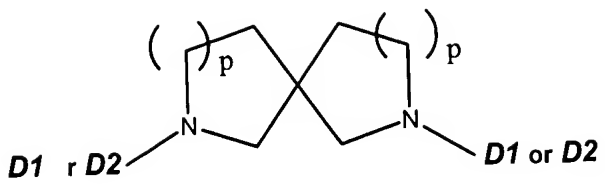


where:

R^{10} is ***D1***–C(O)-, ***D1***-N(H)-CH_2-, ***D1***-S-C(O)-, ***D1***-O-C(S)- or ***D1***-S-CH_2-; and

R^{11} is –C(O)-***D2***, $-CH_2$-N(H)-***D2***; –C(O)-S-***D2***, -C(S)-O-***D2*** or CH_2-S-***D2***;

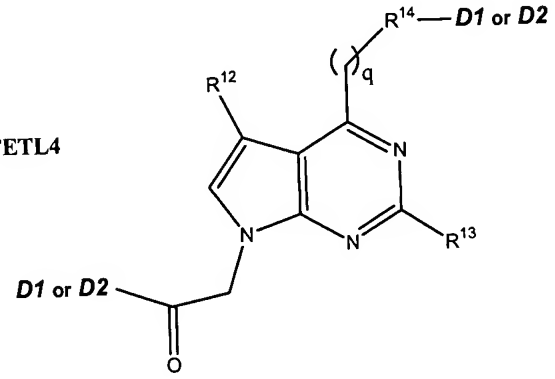
FETL3



where:

p is independently 0, 1, 2 or 3; and

FETL4



where:

q is zero or 1;

R^{12} is H, halo, or optionally substituted-alkyl, -alkenyl, -alkynyl or –aryl;

R^{13} is H, SO_3^- or optionally substituted-alkyl, -alkenyl, -alkynyl or –aryl; and

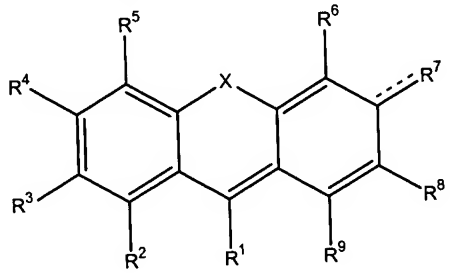
R^{14} is a secondary or tertiary amine or heterocyclyl, particularly N(H) or piperazine.

9. The fluorescence energy transfer dye of Claim 8 where FETL is FETL1 and:

R^{10} is ***D1***–C(O)- or ***D1***-N(H)-CH_2-; and

R^{11} is –C(O)-***D2*** or –CH_2-N(H)-***D2***.

10. An compound represented by the formula:



D1

where:

X is O or C(R*R**), where R* and R** are independently lower alkyl or –CH_2-Z;

R^1 is H, CF_3, perfluoropropyl, lower alkyl acid, substituted aryl, substituted heteroaryl or Z;

R^2 is H, halo, SO_3^-, or is taken together with R^3 to form an optionally substituted fused ring having 5 to 7 atoms;

R^3 is halo, Z, or is taken together with R^2 and/or R^4 to form an optionally substituted fused ring having 5 to 7 atoms;

R^4 is =O or OH, $-N(R^{4'}R^{4''})$ or $=N^+(R^{4'}R^{4''})$, or is taken together with R^3 and/or R^5 to form an optionally substituted fused ring having 5 to 7 atoms,

where $R^{4'}$ is H, lower alkyl or L1, and

$R^{4''}$ is H, lower alkyl or CH_2-Z;

R^5 is H, halo, Z, or is taken together with R^4 to form an optionally substituted fused ring having 5 to 7 atoms;

R^6 is H, halo, Z, or is taken together with R^7 to form an optionally substituted fused ring having 5 to 7 atoms;

R^7 is =O or OH, $-N(R^{7'}R^{7''})$ or $=N^+(R^{7'}R^{7''})$, or is taken together with R^6 and/or R^8 to form an optionally substituted fused ring having 5 to 7 atoms,

where $R^{7'}$ is H, lower alkyl or L1, and

$R^{7''}$ is H, lower alkyl or CH_2-Z;

R^8 is halo, Z, or is taken together with R^7 and/or R^9 to form an optionally substituted fused ring having 5 to 7 atoms;

R^9 is H, halo, SO_3^-, or is taken together with R^8 to form an optionally substituted fused ring having 5 to 7 atoms; and

Z is a group of the formula: $-Z^*-Z^1-$ ***(L1, L2 or FETL)***, where:

Z^* is methylene, methoxy, ethoxy, aminomethyl, aminoethyl, aminopropynyl, aminobutynyl, carboxyethenyl, carboxyethynyl, optionally substituted aryl or optionally substituted heteroaryl;

Z^1 is $-C(O)-$, $-N(Z^2)-$, $-CH_2-O-$, $-CH_2-C(O)-$, $-CH_2-N(Z^2)-$, $-CH_2-S-$, $-CH_2-S(O)-$, $-CH_2-S(O_2)-$ or is absent; and

Z^2 is H, C_1 to C_8 optionally substituted lower alkyl, or optionally substituted aryl;

L1 being a link for attachment to a probe or target, for attachment to a solid support, or is absent;

L2 being a link for attachment to a probe or target, for attachment to a solid support, or is absent; and

FETL being a fluorescence energy transfer linker.

provided that at least one of R^3 to R^8 is Z, where Z^* is optionally substituted aryl or optionally substituted heteroaryl, or a FETL-, probe-, target- and/or support-conjugate thereof.

11. The compound of Claim 10 having one or more of the following:

R^1 is H, CF_3, perfluoropropyl, lower alkyl acid, 5-6 membered mono or 10-12 membered fused substituted aryl or heteroafyl, or Z;

R^2 is H, halo, SO_3^-, or is taken together with R^3 to form an optionally substituted fused 6-membered aryl ring;

R^3 is halo, Z, or is taken together with R^2 and/or R^4 to form an optionally substituted fused 6-membered ring;

R^4 is =O or OH, $-N(R^{4'}R^{4''})$ or $=N^+(R^{4'}R^{4''})$, or is taken together with R^3 and/or R^5 to form an optionally substituted fused 6-membered ring;

R^5 is H, halo, Z, or is taken together with R^4 to form an optionally substituted fused 6-membered ring;

R^6 is H, halo, Z, or is taken together with R^7 to form an optionally substituted fused 6-membered ring;

R^7 is =O or OH, $-N(R^{7'}R^{7''})$ or $=N^+(R^{7'}R^{7''})$, or is taken together with R^6 and/or R^8 to form an optionally substituted fused 6-membered ring;

R^8 is halo, Z, or is taken together with R^7 and/or R^9 to form an optionally substituted fused 6-membered ring;

R^9 is H, halo, SO_3^-, or is taken together with R^8 to form an optionally substituted fused 6-membered aryl ring;

R^4 is $-N(R^{4'}R^{4''})$ or $=N^+(R^{4'}R^{4''})$ and R^7 is $-N(R^{7'}R^{7''})$ or $=N^+(R^{7'}R^{7''})$ when X is C(R*R**); and/or

Z is a group of the formula: $-Z^*-Z^1-$ ***(L1, L2 or FETL)***, where:

Z^* is methylene, methoxy, ethoxy, aminomethyl, aminoethyl, aminopropynyl, aminobutynyl, carboxyethenyl, carboxyethynyl, optionally substituted aryl or optionally substituted heteroaryl,

Z^1 is $-C(O)-$, $-N(Z^2)-$, $-CH_2-O-$, $-CH_2-C(O)-$, $-CH_2-N(Z^2)-$, $-CH_2-S-$, $-CH_2-S(O)-$, $-CH_2-S(O_2)-$ or is absent, and

Z^2 is H, or is C_1 to C_8 lower alkyl or aryl optionally substituted with SO_3^-, COOH, NH_2, CH_2NH_2, SH, or SCH_3.

12. A fluorescence energy transfer dye represented by Formula II:

Probe--L1—(D1 or D2)—FETL-(low affinity false target) **(Formula II)**

where:

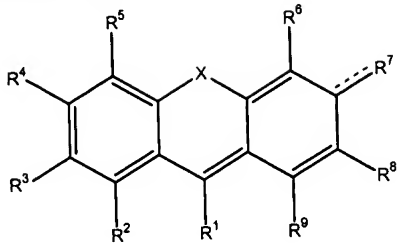
Probe is a polynucleotide, antibody, triglyceride, low density lipoprotein or lectin;

L1 is a link for attachment to a the Probe;

FETL is a fluorescence energy transfer linker comprising a symmetric, rigid or sterically hindered, divalent moiety joined to D1 and D2 via an amine, carbonyl, activated carboxylic acid ester, disulfide, thiol or thiol ester;

low affinity false target is an analyte for the Probe disposed on FETL to deactivate, block or otherwise prevent coupling of FETL to a corresponding D2 or D1 until said low affinity false target is displaced by a higher affinity true target;

D1 is a donor dye represented by the formula:



D1

where:

X is O or C(R*R**), where R* and R** are independently lower alkyl or $-CH_2$-Z;

R^1 is H, CF_3, perfluoropropyl, lower alkyl acid, substituted aryl, substituted heteroaryl or Z;

R^2 is H, halo, SO_3^-, or is taken together with R^3 to form an optionally substituted fused ring having 5 to 7 atoms;

R^3 is halo, Z, or is taken together with R^2 and/or R^4 to form an optionally substituted fused ring having 5 to 7 atoms;

R^4 is =O or OH, -N($R^{4'}R^{4''}$) or =N^+($R^{4'}R^{4''}$), or is taken together with R^3 and/or R^5 to form an optionally substituted fused ring having 5 to 7 atoms,

where $R^{4'}$ is H, lower alkyl or L1, and

$R^{4''}$ is H, lower alkyl or CH_2-Z;

R^5 is H, halo, Z, or is taken together with R^4 to form an optionally substituted fused ring having 5 to 7 atoms;

R^6 is H, halo, Z, or is taken together with R^7 to form an optionally substituted fused ring having 5 to 7 atoms;

R^7 is =O or OH, -N($R^{7'}R^{7''}$) or =N^+($R^{7'}R^{7''}$), or is taken together with R^6 and/or R^8 to form an optionally substituted fused ring having 5 to 7 atoms,

where $R^{7''}$ is H, lower alkyl or L1, and

$R^{7''}$ is H, lower alkyl or CH_2-Z;

R^8 is halo, Z, or is taken together with R^7 and/or R^9 to form an optionally substituted fused ring having 5 to 7 atoms;

R^9 is H, halo, SO_3^-, or is taken together with R^8 to form an optionally substituted fused ring having 5 to 7 atoms; and

Z is a group of the formula: -Z*-Z^1- (***L1, L2 or FETL***), where:

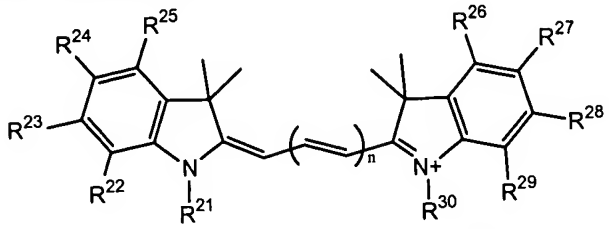
Z* is methylene, methoxy, ethoxy, aminomethyl, aminoethyl, aminopropynyl, aminobutynyl, carboxyethenyl, carboxyethynyl, optionally substituted aryl or optionally substituted heteroaryl;

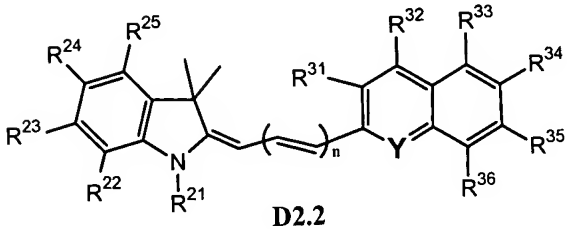
Z^1 is –C(O)- , -N(Z^2)- , $-CH_2$-O- , $-CH_2$-C(O)- , $-CH_2$-N(Z^2)- , $-CH_2$-S- , $-CH_2$-S(O)- , $-CH_2$-S(O_2)- or is absent; and

Z^2 is H, C_1 to C_8 optionally substituted lower alkyl, or optionally substituted aryl; and

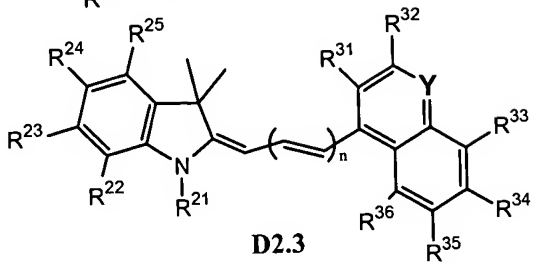
D2 is an acceptor/reporter dye represented by formula D1 or by a formula of the group:

D2.1





D2.2



D2.3

where:

at least one of R^{21} to R^{36} is joined to FETL,

n is zero, 1, 2 or 3;

R^{21} and R^{30} are independently $-CH_2$-Z, activated lower alkyl, or optionally substituted arlkyl;

R^{22} to R^{29} are independently H, SO_3^-, or optionally substituted alkyl, or R^{22} and R^{23}, R^{23} and R^{24}, R^{24} and R^{25}, R^{26} and R^{27}, R^{27} and R^{28}, and/or R^{28} and R^{29} taken together form an optionally substituted fused ring having 6 atoms; and

R^{31} and R^{32} are independently H, optionally substituted alkyl, aryl, or taken together form an optionally substituted fused ring having 6 atoms;

R^{33} to R^{36} are independently H, SO_3^-, optionally substituted alkyl, aryl, or R^{33} and R^{34}, R^{34} and R^{35}, and/or R^{35} and R^{36} taken together form an optionally substituted fused ring having 6 atoms; and

Y is –O- or -N(Y^1)- where Y^1 is $-CH_2$-Z, activated lower alkyl, or optionally substituted arlkyl.

13. An assay requiring no pre-analysis purification for removal of unbound dye, comprising the steps of:

(a) contacting a substance to be tested and a target site specific Probe-L1-(D1 or D2)-FETL-(low affinity false target) conjugate of Claim 12 in a suitable assay vessel under conditions suitable for preferential binding of the Probe to the target site, as opposed to the low affinity false target;

(b) introducing a D2 or D1 fluorescence energy transfer dye having an activated site for coupling to the FETL into the vessel, under conditions suitable for coupling to FETL where the low affinity false target is not bound to the Probe;

(c) causing D1 to absorb energy; and

(d) measuring the level of D2 emission.

14. An assay requiring no pre-analysis purification for removal of unbound dye, comprising either the steps of:

(a) in a suitable assay vessel, contacting a substance to be tested and a Probe1-L1-D1 conjugate that is site-specific for a first epitope on a target;

(b) introducing a Probe2-L2-D2 conjugate to the vessel, where said Probe2 is site-specific for bound Probe 1 or for a second epitope spatially proximate to said first epitope;

(c) causing D1 to absorb energy; and

(d) measuring the level of D2 emission,

or the steps of:

(e) contacting a substance to be tested and a target site specific Probe-L1-(D1 or D2)-FETL-(low affinity false target) conjugate in a suitable assay vessel under conditions suitable for preferential binding of the Probe to the target site, as opposed to the low affinity false target;

(f) introducing a D2 or D1 fluorescence energy transfer dye having an activated site for coupling to the FETL into the vessel, under conditions suitable for coupling to FETL where the low affinity false target is not bound to the Probe;

(g) causing D1 to absorb energy; and

(h) measuring the level of D2 emission.

15. A proximity assay comprising the steps of :

(a) contacting a substance to be tested and a target-site-specific donor dye in a suitable assay vessle;

(b) introducing a target-site-specific reporter dye into the vessel, where said reporter dye's target is either spatially proximate to said donor dye target or specific for a given target to be tested for spatial proximity to said donor dye target, and said reporter dye's energy absorption spectra overlaps the emission spectra of said donor dye;

(c) causing the donor dye to absorb energy; and

(d) measuring the level of reporter dye emission.

16. The proximity assay of Claim 14 wherein:

step (b) further comprises introducing two or more target-site-specific reporter dyes into the vessel, said reporter dyes having overlapping energy absorption spectra, distinct emission spectra, and having different targets to be tested for spatial proximity to said donor dye target; and

step (d) further comprises measuring the level of reporter dye emission at the wavelengths characteristic of said reporter dyes.

17. A proximity assay comprising the steps of :

(a) contacting a substance to be tested and a target-site-specific donor dye in a suitable assay vessle;

(b) introducing a target-site-specific fluorescence energy transfer reporter dye of Claim 1 into the vessel, where said reporter dye's target is either spatially proximate to said donor dye target or specific for a given target to be tested for spatial proximity to said donor dye target, and said reporter dye's energy absorption spectra overlaps the emission spectra of said donor dye;

(c) causing the donor dye to absorb energy; and

(d) measuring the level of reporter dye emission.

18. The proximity assay of Claim 17 wherein:

step (b) further comprises introducing two or more target-site-specific fluorescence energy transfer reporter dye of Claim 1 into the vessel, said reporter dyes having energy absorption spectra overlapping the emission spectra of said donor dye, distinct emission spectra, and having different targets to be tested for spatial proximity to said donor dye target; and

step (d) further comprises measuring the level of reporter dye emission at the wavelengths characteristic of said reporter dyes.